

## Proposal for the CDPHE regarding the ACS Regulations Stakeholder Process

The following information is for consideration and includes the following:

- Narrative regarding background and approach,
- Proposed definitions
- BMP table based on definitions

The proposed table lays out an approach to managing soil that has visible ACM (friable and non-friable) and provides triggers for applicability into the regulation and/or best management practices to implement. Currently under the regulation these scenarios are all being managed in the same way but they present different levels of concern depending on whether or not friable or non-friable ACM exists in the soil. The proposed table breaks out categories of soil with ACM and suggests specific management practices for each scenario. By breaking soil into categories we are attempting to define soil contaminated with asbestos in a more specific way that does not tie the definition to “any” amount of asbestos but, more practically, to specific types of ACM. We are also associating best management practices with each category to demonstrate how these scenarios may be implemented.

This approach attempts to clarify several inconsistencies and confusion with the current regulation and how it is being implemented:

1. Redefines the definition of asbestos-contaminated soil as soil contaminated with ACM, etc.
2. Definitively identifies when soil with non-friable asbestos triggers the regulation and when it is exempt from the regulation.
3. Replaces the “presence or absence” of one fiber of asbestos with best management practices for minimizing and mitigating the occurrence of fibers that may become airborne during soil disturbing activities.
4. Addresses the disposal criteria or reuse of soil onsite.

Proposed definitions:

**"Adequately wet"** means sufficiently mix or coat with liquid or an aqueous solution to mitigate dust emissions.

**“ALARA”** means as low as reasonably achievable based on consideration of all relevant factors, including cost.

**“Asbestos”** means the asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), amosite (cummingtonite-grunerite), anthophyllite, actinolite, and tremolite.

**“Asbestos-containing material (ACM)”** means any material, other than soil, that contains more than one percent (1%) asbestos by weight, area, or volume. This term includes commercial asbestos, asbestos mill tailings, asbestos waste from control devices, asbestos waste, asbestos-containing building material, and bags or containers that previously contained commercial asbestos.

**“Asbestos-Contaminated Soil (ACS)”** means soil containing more than one percent of asbestos by weight, area or volume in the soil matrix, but contains no visible asbestos containing material.

**“Soil with Visible Non-Friable Asbestos Containing Material (NF-ACM)”** means soil with visible non-friable asbestos containing material that has not been rendered friable.

**“Soil with Visible Friable Asbestos Containing Material (NF-ACM)”** means soil with visible asbestos containing material that meets the definition of friable asbestos containing material.

**“Soil with Visible Non-Friable Asbestos Containing Material (NF-ACM) Rendered Friable”** means soil with visible non-friable asbestos containing material for which, collectively, more than 25 percent of the visible pieces of asbestos containing material have been damaged to the extent they are rendered friable.

**“Asbestos waste”** means any asbestos containing material, other than soil, whether it contains friable or non-friable asbestos that is not intended for further use. This term includes but is not limited to asbestos mill tailings, asbestos from pollution control devices, and containers that contain asbestos.

**“Asbestos waste disposal area”** means an area approved for the disposal of asbestos waste at a solid waste facility, including, but not limited to, a trench or monofill.

**“Friable”** means that the material, when dry, may be crumbled, pulverized, or reduced to powder by hand pressure, and includes previously nonfriable material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

**“Visible”** means perceptible to the human eye without magnification beyond normal corrective lenses or eyeglasses.

**“Friable asbestos containing material”** means asbestos containing material that can be pulverized or reduced to powder by hand pressure when dry.

**“Friable asbestos waste”** means waste that consists of friable asbestos containing material, soil with Visible Friable asbestos containing material or soil with Visible Non-Friable asbestos containing material that has been rendered friable.

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**"Nonfriable asbestos waste"** means any asbestos waste other than friable asbestos waste.

**"Regulated work area"** means the portion(s) of a work area subject to Section 5.5 of this regulation.

**"Work area"** means the portion(s) of a site for which soil disturbing activities are planned or are occurring.

Table 1

Best Management Practices

Soil with Visible Friable Asbestos Containing Material,  
Soil with Visible Non-Friable Asbestos Containing Material Rendered Friable, and  
Asbestos Contaminated Soil (See definitions)

Category		Regulation Applicable?	BMPs			Transport/Disposal
			Residential Landuse	Industrial/ Commercial Landuse	Rural/ Open Space Landuse	
a	Soil w/ Visible F-ACM	Yes	<p>Adequately wet soil, "Pick &amp; Go", Remove ACM, Remove 6" soil around ACM;</p> <p>OR</p> <p>Adequately wet soil, Work stoppage for wind speeds, No visible fugitive dust<sup>2</sup>, Personal air monitoring<sup>3</sup>, Controlled site access/signage</p> <p>OR</p> <p>Conduct Site Specific Risk Assessment to determine appropriate level of BMP protectiveness</p>	Same as residential	Same as residential	<p>Per DOT:</p> <p>[Suggested Workgroup Discussion:</p> <ul style="list-style-type: none"> <li>DOT says have to be in sift-proof and leak-proof. DOT does not require two liners, or really any liner as long as the friable acm is is being transported in a sift- and leak-proof manner. The truck must be covered and placarding may be required in some instances.</li> <li>Manifest instructions to include no use for daily cover]</li> </ul>
b	Soil w/ Visible NF-ACM Rendered Friable <sup>1</sup>	Yes	Same as (a)	Same as (a)	Same as (a)	Per DOT [see above discussion points]

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Category		Regulation Applicable?	BMPs			Transport/Disposal
			Residential Landuse	Industrial/ Commercial Landuse	Rural/ Open Space Landuse	
c	ACS	Yes	Adequately wet ACS, Work stoppage for wind speeds, No visible fugitive dust <sup>2</sup> , Personal air monitoring <sup>3</sup> , CABI inspection for visible ACM, Controlled site access/signage  OR  Conduct Site Specific Risk Assessment to determine equivalent level of BMP protectiveness	Same as residential	Same as residential	Adequately wet, Slip liner, or no liner plus decontamination of truck bed at end of project/work day, Cover truck bed, Manifest instructions to include no use for daily cover
d	Soil w/ Visible NF-ACM	No	NA	NA	NA	NA

1. Percent rendered friable to be determined by CDPHE CABI with at least six-months of experience
2. To be determined by CDPHE CABI with at least six-months of experience
3. Air-monitoring to be conducted by CDPHE Certified Air Monitoring Specialist

Notes:

BMP- Best Management Practices

w/ –with

w/o–without

F-ACM –Friable Asbestos Containing Material.

NF-ACM –NF- Asbestos Containing Material

ACS–Asbestos Contaminated Soil

NA –Not Applicable

CABI –Certified Asbestos Building Inspector

DOT–Department of Transportation